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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/564,133	01/19/2007	Terry Victor Clapp	2143.000300/KDG	8863
23720	7590	12/18/2008	EXAMINER	
WILLIAMS, MORGAN & AMERSON			SMITH, CHAD	
10333 RICHMOND, SUITE 1100				
HOUSTON, TX 77042				
			ART UNIT	PAPER NUMBER
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/564,133	Applicant(s) CLAPP, TERRY VICTOR	
	Examiner Chad H. Smith	Art Unit 2874	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 10/21/08.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,3-11 and 13-40 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 13-15 and 24-27 is/are allowed.
- 6) ☒ Claim(s) 1,3-11, 16-20, and 28-39 is/are rejected.
- 7) ☒ Claim(s) 21-23 and 40 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 10 January 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|----------------------------------------------------------------------------------------|-------------------------------------------------------------------|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>11/25/08</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Arguments

Applicant's arguments filed on 10/21/08 have been fully considered but they are not persuasive. Applicant uses the reasoning for the allowable subject matter of claims 24 – 27, which has a different structural limitations as a whole than those of claims 1 – 12. Also, as applicant has amended claim 1 to incorporate claims 2 and 12 it can be seen from the previous office action that the Minemoto et al. reference meets these limitations.

Claim Objections

Claim 14 is objected to because of the following informalities: There is no antecedent basis for “the at least one electrode”. Appropriate correction is required.

Allowable Subject Matter

Claims 13 – 15 are allowed. The following is a statement of reasons for the indication of allowable subject matter: The allowable subject matter of claim 13, as indicated in the previous office action, has been placed into independent form.

Claims 24 – 27 are allowed. The following is a statement of reasons for the indication of allowable subject matter: The reasons for indicating allowable subject matter of claim 24 has been presented in the previous office action.

Art Unit: 2874

Claims 21 – 23, and 40 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. The following is a statement of reasons for the indication of allowable subject matter: The prior art of record, taken alone or in combination, fails to disclose or render obvious an electrode having at least one curved edge.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

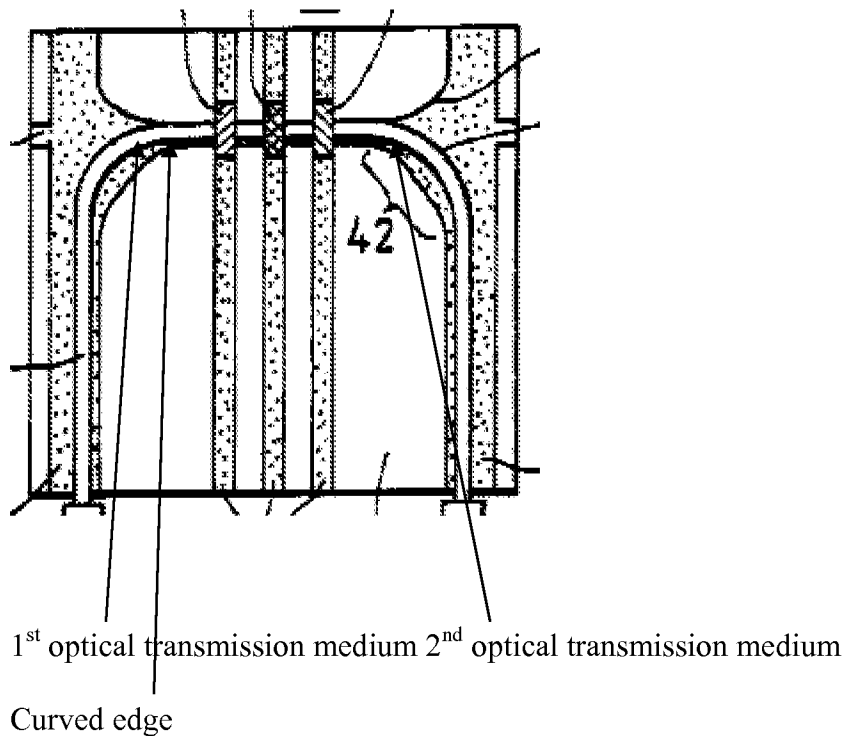
A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1, 3 – 11, 16 – 20, 28 – 36 and 39 are rejected under 35 U.S.C. 102(b) as being anticipated by Minemoto et al. (U.S. Patent # 5,699,461).

In Re claims 1 – 6, 9, 28 – 32, 34, 35 ‘461 teaches an apparatus, comprising: a first optical transmission medium formed in at least a portion of a device layer (10); a second optical transmission medium formed in at least a portion of the device layer; and a slot formed in at least a portion of the device layers (12), wherein the slot has at least one curved edge having a non-zero radius of curvature, and wherein the slot is disposed adjacent to the first and second transmission media (furthermore col. 15, line 52 and col. 16, lines 21 – 22 states the liquid crystal material is in the light path inherently making the fiber as at least two separates pieces at the edge of the slot) and a phase adjusting element deployed in the slot (liquid crystal).

Art Unit: 2874



In Re claims 7 and 8, '461 teaches the slot edge and the waveguide end face being coplanar at the optical element 22, forming a 0 degree angle to one another (figure above).

In Re claims 10, 11 and 33, '461 teaches a polarizer (22).

In Re claims 16, 17, and 36 '461 teaches a phase adjusting element (liquid crystal).

In Re claim 18, '461 teaches a thermosetting epoxy resin (col. 20, lines 18 – 21).

In Re claim 19, inherently the substrate when manufactured will set up in a preferred molecular orientation.

In Re claim 20, '461 teaches an electrode proximate the slot (col. 22, lines 30 – 32) furthermore liquid crystal is responsive to an electric field.

In Re claim 39, '461 teaches of a quarter wave plate introduced in the slot, which would be a refractive index modifier (col. 15, line 58).

Art Unit: 2874

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 37 and 38 are rejected under 35 U.S.C. 103(a) as being unpatentable over Minemoto et al. (U.S. Patent # 5,699,461) in view of Asakura et al. (U.S. Patent # 5,311,606).

'461 teaches the method of claim 34 as previously discussed above, but is silent to either the first or second optical transmission medium having an auxiliary dopant. '606 teaches using erbium doping for high amplification and superior noise characteristics (col. 1, lines 23 – 26). It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings '461's method with '606's teaching of using erbium doping so that the sensor system will have high amplification and superior noise characteristics. Furthermore, as the fiber is laying in the substrate, it is making contact with the bottom surface of the slot.

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after

Art Unit: 2874

the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Chad H. Smith whose telephone number is (571) 270-1294. The examiner can normally be reached on Monday-Thursday 7:00 am - 4:30 pm EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Uyen-Chau Le can be reached on 571-272-2397. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Chad H Smith/
Examiner, Art Unit 2874

Application/Control Number: 10/564,133

Page 7

Art Unit: 2874

/Sung H. Pak/

Primary Examiner, Art Unit 2874